

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

**TRAXCELL TECHNOLOGIES, LLC,
Plaintiff,**

**v.
VERIZON WIRELESS PERSONAL
COMMUNICATIONS, LP,
Defendant.**

CASE NO. 6:20-CV-01175

JURY DEMAND

PLAINTIFF’S ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Traxcell Technologies, LLC. (“Traxcell”) files this Original Complaint, and demand for jury trial seeking relief from patent infringement by Verizon Wireless Personal Communications, LP (“Defendant” or “Verizon”), alleging infringement of the claims of U.S. Pat. No. 9,918,196; U.S. Pat. No. 10,390,175; U.S. Pat. No. 10,701,517; U.S. Pat. No. 10,743,135; and, U.S. Pat. No. 10,820,147 (collectively referred to as “Patents-in-Suit”), as follows:

I. THE PARTIES

1. Plaintiff Traxcell is a Texas Limited Liability Company, with its principal place of business located at 103 Country Club Drive. #508, Marshall, Texas 75672.

2. Verizon Wireless Personal Communications, LP is Delaware corporation with its principal place of business at One Verizon Way, Basking Ridge, New Jersey and a registered agent for service of process at CT Corp System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136. On information and belief, Verizon Wireless Personal Communications, LP sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and services that perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district.

II. JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the U.S., 35 U.S.C. §§ 1 et. seq. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).
4. This Court has personal jurisdiction over Defendants because: Defendants are present within or has minimum contacts within the State of Texas and this judicial district; Defendants have purposefully availed itself of the privileges of conducting business in the State of Texas and in this judicial district; Defendants regularly conducts business within the State of Texas and within this judicial district; and Plaintiff's cause of action arises directly from Defendants' business contacts and other activities in the State of Texas and in this judicial district.
5. Venue is proper in this district under 28 U.S.C. § 1400(b). Defendants have committed acts of infringement and have a regular and established place of business in this District.

III. INFRINGEMENT ('196 Patent (attached as Exhibit A))

6. On March 13, 2018, U.S. Patent No. 9,918,196 ("the '196 patent"), attached as Exhibit A, entitled "Internet queried directional navigation system with mobile and fixed originating location determination" was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the '196 patent by assignment.
7. The '196 Patent's Abstract states, "A mobile wireless network and a method of operation provide directional assistance in response to an Internet query. The directional assistance is provided from a location of the querying device to a destination that may be selectively prompted based on whether the destination is a nearby business, a type of business, a street address, or another mobile device or fixed telephone location. The location of the querying

device is also selectively determined depending on whether the querying device is a wireless device such as a mobile telephone, or whether the device has a presumed fixed location, such as an ordinary telephone connected to a public-switched telephone network (PSTN).

8. The following preliminary exemplary chart provides notice of Traxcell's allegations of infringement.

Claim 1	Corresponding Structure in Accused Systems
<p>1. A method of providing navigation assistance to a user of a communications device, the method comprising:</p>	<p>Verizon's wireless telecommunications network that supports the Apple Maps online navigation service together with the Apple Maps (or other navigation/mapping service provider) server-side or cloud infrastructure needed to provide the service, constitute the "Accused System".</p> <p>The term "Apple Maps" encompasses and includes all the versions and variants of the Apple Maps web (for PCs, laptops and other computers functioning with macOS or Mac OS X operating systems) and the Apple Maps app [Apple Maps app for iOS devices (iPhone, iPad, iPod Touch etc.) and watchOS devices] and the applications supported by the Apple Maps Platform.</p> <p>The "method of providing navigation assistance to a user of a communications device" refers to the method by which Apple Maps provides online navigation assistance (directions) to a user of a communications device or UE (example: mobile phone, smartphone, laptop, tablet, iPhone, iPad, iPod Touch etc.) including the Apple Maps app or including a browser plugin enabling access to the Apple Maps website or having other means to access the Apple Maps website, for querying and receiving navigation instructions for travelling from a starting location (current location of the communications device or a location specified by its user as the 'origin') to a destination location (a location specified by the said user as the 'destination').</p>
<p>receiving, by a directional assistance service, an Internet query initiated at the communications device and directed via the Internet to initiate a request for</p>	<p>Navigation using Apple Maps online navigation service (or other navigation/mapping service) is a well-known example of off-board navigation. To elaborate, an off-board navigation system is a client/server system wherein only the user interface (UI) resides on the client's (user's) communications device and all the databases (GIS and/or mapping) and infrastructure required for computation (of route, distance, travel time, traffic etc.) reside remotely on a server or a network of servers (the server-side) located on the world wide web (www). The server-side could also comprise virtual (instead of physical) or cloud server infrastructure. The client side (user interface or UI at a user's communications device) can only communicate with the server-side via the Internet.</p>

Claim 1	Corresponding Structure in Accused Systems
navigational assistance to a destination;	<p>This claim element refers to the method and process involved in initiating a navigation query, using Apple Maps online navigation service, to obtain directions (navigation assistance) for travelling from a starting location to a destination location. The process involved in initiating the said navigation query includes inputting a destination location at the Apple Maps' user interface (UI) at the user's communications device, and sending the said query via Internet to the remote Apple Maps server (cloud server). The said remote Apple Maps server (cloud server) receives the said query via Internet.</p> <p>The term "directional assistance service" herein refers to Apple Maps online navigation service supported and facilitated by Verizon's wireless telecommunications network.</p>
responsive to receiving the Internet query, determining whether or not the communications device is a mobile wireless communications device;	<p>Apple Maps (or other navigation/mapping service) is programmed to identify the "phone number" and the "device identifiers" of the communications device (UE) at which the said navigation query is initiated. In other words, Apple Maps determines whether or not the said communications device (UE) is a mobile wireless communications device (UE)</p> <p>"a mobile wireless communications device" refers to a mobile wireless communications device or UE (example: mobile phone, smartphone, laptop, tablet, iPhone, iPad, iPod Touch etc.), which includes the Apple Maps app or includes a browser plugin enabling access to the Apple Maps website or has other means to access the Apple Maps website for querying and receiving navigation instructions for travelling from a starting point (current location of the communication's device or a location specified by its user as the 'origin') to a destination location (a location specified by the said user as the 'destination'). The said mobile wireless communications device being a subscriber of Verizon's wireless telecommunications network services. Any wireless mobile communications device, which uses Verizon's Mobile Hotspot for connecting to the Internet and includes the Apple Maps app or a browser plugin enabling access to the Apple Maps website or has other means to access the Apple Maps website, also corresponds to this claim element.</p> <p>In Attachment 6, Apple's Privacy Policy document, it is clearly indicated that Apple (which includes Apple Maps) collects information such as phone number and device identifiers pertaining to the communications device (UE) at which a navigation query is initiated and communicated to the Apple Maps server. In other words, Apple Maps has means to determine whether a querying communications device (UE) is a mobile wireless communications device (UE) or not.</p> <p>The following is mentioned therein –</p> <p>"What personal information we collect</p> <p>When you create an Apple ID, apply for commercial credit, purchase a product, download a software update, register for a class at an Apple Retail Store, connect to our services, contact us including by social media or participate in an online survey, we may collect a variety of information, including your name, mailing address, phone number, email address, contact</p>

Claim 1	Corresponding Structure in Accused Systems
	<p>preferences, device identifiers, IP address, location information, credit card information and profile information where the contact is via social media.”</p> <p>In the aforementioned, it is also mentioned that when a user connects to Apple’s services (like Apple Maps online navigation), Apple also collects the IP address from which the said user connects to Apple’s services (like Apple Maps online navigation). In other words, when a user connects to the Apple Maps server using the client-side UI on his/her communications device (UE) via Internet, the Apple Maps server collects the IP address from which the said user connects to the Apple Maps server.</p> <p>Based on the above information, it is confirmed that whenever a communications device uses Apple Maps, information such as mobile network information including the name of the carrier providing data services to the said communications device are collected by Apple (Apple Maps). In other words, Apple Maps can also ascertain whether the communications device (UE) at which the said navigation query is initiated, is connected to the Apple Maps server through Verizon’s wireless telecommunications network service (i.e. through RF signal-based communication) or through a Wi-Fi network supported by a fixed (wired or wireless) broadband Internet service.</p> <p>In summary, Apple Maps has means to determine whether a querying communications device (UE) is a mobile wireless communications device (UE) or not, and also whether the said communications device (UE) is connected to the Apple Maps server through Verizon’s wireless telecommunications network service (i.e. through RF signal-based communication) or through a Wi-Fi network supported by a fixed (wired or wireless) broadband Internet service.</p>
<p>responsive to determining that the communications device is the mobile wireless communications device, the directional assistance service determining and using a present location of the mobile wireless communications device as a location of the</p>	<p>If the Apple Maps online navigation service (or other navigation/mapping service) is determines that the said navigation query has been initiated at a mobile wireless communications device (UE), and that the said query was communicated through Verizon’s wireless telecommunications network service (i.e. through RF signal-based communication), Apple Maps determines current location of the mobile wireless communications device (UE) and uses it as the starting point for providing navigation information (instructions or directions) to travel to the destination input by the user of the said communications device (UE).</p> <p>The “the mobile wireless communications device” or the “communications device” refers to the mobile wireless communications device or UE (example: mobile phone, smartphone, laptop, tablet, iPhone, iPad, iPod Touch etc.) at which the navigation query was initiated.</p> <p>A user can simply input a “destination” entry and initiate a navigation query on the Apple Maps’ client-side user interface (UI) at the user’s mobile wireless communications device (Apple Maps app on an iPhone). The Apple Maps server, upon receiving the navigation query (including input “destination”) from the client-side via Internet, determines the “current location” of the user’s mobile wireless communications device, uses it as the default starting point, ascertains the location of the input “destination”, computes or calculates the route(s) and</p>

Claim 1	Corresponding Structure in Accused Systems
communications device;	<p>directions, and downloads the computed or calculated route(s) and directions to the user's mobile wireless communications device.</p> <p>As has been mentioned with reference to the previous claim element, Apple Maps, upon receiving a navigation query from a user's communications device, determines whether or not the said communications device is a mobile wireless communications device.</p> <p>It is clearly indicated in Attachment 47, that a user can simply input a "destination" entry and initiate a navigation query on the Apple Maps' client-side user interface (UI) at the user's mobile wireless communications device (Apple Maps app on iPhone, iPad or iPod Touch). The Apple Maps server, upon receiving the navigation query (including input "destination") from the client-side via Internet, determines the "current location" of the user's mobile wireless communications device, uses it as the default starting point, ascertains the location of the input "destination", computes or calculates the route(s) and directions, and downloads the computed or calculated route(s) and directions to the user's mobile wireless communications device. The following is mentioned therein –</p> <p>“Get directions</p> <ol style="list-style-type: none"> 1. Open Maps and enter your destination in the Search bar. 2. Tap Directions. 3. Choose Drive, Walk, Transit, or Ride. 4. Select the route that you prefer. Maps shows the fastest route first based on traffic conditions. 5. When you're ready, tap “GO”. To see an overview of your route, tap "Tap for Overview" in the banner. 6. To end navigation, tap “End”, in the bottom right corner. Then tap End Route. You can also ask Siri to "Stop Navigating" when you have Hands-Free turned on.”
responsive to determining that the communications device is not the mobile wireless communications device, obtaining a fixed location	<p>As mentioned previously, Apple Maps (or other navigation/mapping service) is programmed to identify the “phone number” and the “device identifiers” of the communications device (UE) at which the said navigation query is initiated, and also to ascertain the IP address from where the communications device (UE) at which the said navigation query is initiated connected to the Apple Maps server.</p> <p>In other words, Apple Maps has means to determine whether a querying communications device (UE) is a mobile wireless communications device (UE) or not, and also whether the said communications device (UE) is connected to the Apple Maps server through Verizon's wireless telecommunications network service (i.e. through RF signal-based communication) or through a Wi-Fi network supported by a fixed (wired or wireless) broadband Internet service.</p>

Claim 1	Corresponding Structure in Accused Systems
<p>associated with the communications device to determine the location of the communications device; and</p>	<p>In Attachment 6, Apple’s Privacy Policy document, it is clearly indicated that Apple (which includes Apple Maps) collects information such as phone number and device identifiers pertaining to the communications device (UE) at which a navigation query is initiated and communicated to the Apple Maps server. In other words, Apple Maps has means to determine whether a querying communications device (UE) is a mobile wireless communications device (UE) or not.</p> <p>The following is mentioned therein –</p> <p>“What personal information we collect</p> <p>When you create an Apple ID, apply for commercial credit, purchase a product, download a software update, register for a class at an Apple Retail Store, connect to our services, contact us including by social media or participate in an online survey, we may collect a variety of information, including your name, mailing address, phone number, email address, contact preferences, device identifiers, IP address, location information, credit card information and profile information where the contact is via social media.”</p> <p>In the aforementioned, it is also mentioned that when a user connects to Apple’s services (like Apple Maps online navigation), Apple also collects the IP address from which the said user connects to Apple’s services (like Apple Maps online navigation). In other words, when a user connects to the Apple Maps server using the client-side UI on his/her communications device (UE) via Internet, the Apple Maps server collects the IP address from which the said user connects to the Apple Maps server.</p> <p>Based on the above information, it is confirmed that whenever a communications device uses Apple Maps (or other navigation/mapping service), information such as mobile network information including the name of the carrier providing data services to the said communications device are collected by Apple (Apple Maps). In other words, Apple Maps can also ascertain whether the communications device (UE) at which the said navigation query is initiated, is connected to the Apple Maps server through Verizon’s wireless telecommunications network service (i.e. through RF signal-based communication) or through a Wi-Fi network supported by a fixed (wired or wireless) broadband Internet service.</p> <p>In summary, Apple Maps has means to determine whether a querying communications device (UE) is a mobile wireless communications device (UE) or not, and also whether the said communications device (UE) is connected to the Apple Maps server through Verizon’s wireless telecommunications network service (i.e. through RF signal-based communication) or through a Wi-Fi network supported by a fixed (wired or wireless) broadband Internet service.</p> <p>If Apple Maps determines that the communications device (UE) at which the said navigation query is initiated is not a mobile wireless communications device, or in other words, if the said</p>

Claim 1	Corresponding Structure in Accused Systems
	<p>communications device (UE) is determined to be a stationary or fixed communications device, for example – a Mobile phone, smartphone, iPhone, iPad, iPod Touch, laptop or tablet connected or tethered to a Wi-Fi (internet) access point, modem, router or Wi-Fi hotspot supported by a fixed (wired or wireless) broadband Internet Service, Apple Maps determines the location of the said stationary or fixed communications device by identifying the Internet Service Provider or Wi-Fi hotspot serving the said communications device and obtaining the stationary location of the said Wi-Fi (internet) access point, modem, router or hotspot from a Wi-Fi database, Wi-Fi location database or Wi-Fi hotspot database.</p> <p>“Additionally, some cell phones, are designed to be able to connect to the Internet via a cellular broadband network and/or via Wi-Fi network (aka a local wireless Internet access point). If a cell phone connects via a Wi-Fi network, that connection can also disclose more or less precise information about a cell phone’s location depending upon how the Internet Service Provider provides the wireless Internet connection. Some cell phones also keep a temporary file of nearby cell phone towers and Wi-Fi hotspots (places that offer local wireless Internet access), to potentially make the cell phone user’s connectivity more efficient.”</p>
<p>the directional assistance service providing navigation information to the communications device in response to the Internet query, wherein the navigation provides directions for proceeding from the location of the communications device to a location of the destination.</p>	<p>In response to receiving the navigation query (which includes the “destination” entry input by the user at the Apple Maps client-side user interface or UI residing at the user’s communications device) initiated at the communications device (UE) and directed via the Internet, Apple Maps server determines the current location of the querying (the user’s) communications device, considers it the default starting point, ascertains the location of the input “destination”, computes and provides the navigation information (directions) to the said communications device (UE) to travel from the current location of said communications device (UE) to the input destination.</p> <p>A user can simply input a “destination” entry and initiate a navigation query on the Apple Maps’ client-side user interface (UI) at the user’s mobile wireless communications device (Apple Maps app on iPhone, iPad or iPod Touch). The Apple Maps server, upon receiving the navigation query (including input “destination”) from the client-side via Internet, determines the “current location” of the user’s mobile wireless communications device, uses it as the default starting point, ascertains the location of the input “destination”, computes or calculates the route(s) and directions, and downloads the computed or calculated route(s) and directions to the user’s mobile wireless communications device. In this manner, Apple Maps provides the navigation information (directions) to the said communications device (UE) to travel from the current location of said communications device (UE) to the input destination.</p> <p>The following is mentioned therein –</p> <p>“Get directions</p> <p>1. Open Maps and enter your destination in the Search bar.</p>

Claim 1	Corresponding Structure in Accused Systems
	<p>2. Tap Directions.</p> <p>3. Choose Drive, Walk, Transit, or Ride.</p> <p>4. Select the route that you prefer. Maps shows the fastest route first based on traffic conditions.</p> <p>5. When you're ready, tap "GO". To see an overview of your route, tap "Tap for Overview" in the banner.</p> <p>6. To end navigation, tap "End", in the bottom right corner. Then tap End Route. You can also ask Siri to "Stop Navigating" when you have Hands-Free turned on."</p>

9. Defendant makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use identified locations of wireless devices to provide directional assistance such that Defendant infringes claims 1–30 of the '196 patent, literally or under the doctrine of equivalents.
10. Defendant put the inventions claimed by the '196 Patent into service (i.e., used them); but for Defendant's actions, the claimed-inventions embodiments involving Defendant's products and services would never have been put into service. Defendant's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Defendant obtaining monetary and commercial benefit from it.
11. Defendant has and continues to induce infringement. Defendants have actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use identified locations of wireless devices to provide directional assistance) such to cause infringement claims 1–30 of the '196 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known and should have known of the '196 patent, by at least by the date of

the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant's patent applications, such that Defendant knew and should have known that it was and would be inducing infringement.

12. Defendant has and continues to contributorily infringe. Defendant has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components that use identified locations of wireless devices to provide directional assistance) such as to cause infringement of one or more of claims 1–30 of the '196 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known of the '196 patent and the technology underlying it from at least the date of issuance of the patent or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant's patent applications, such that Defendant knew and should have known that it was and would be contributorily infringing.

13. Defendants have caused and will continue to cause Traxcell damage by infringing the '196 patent.

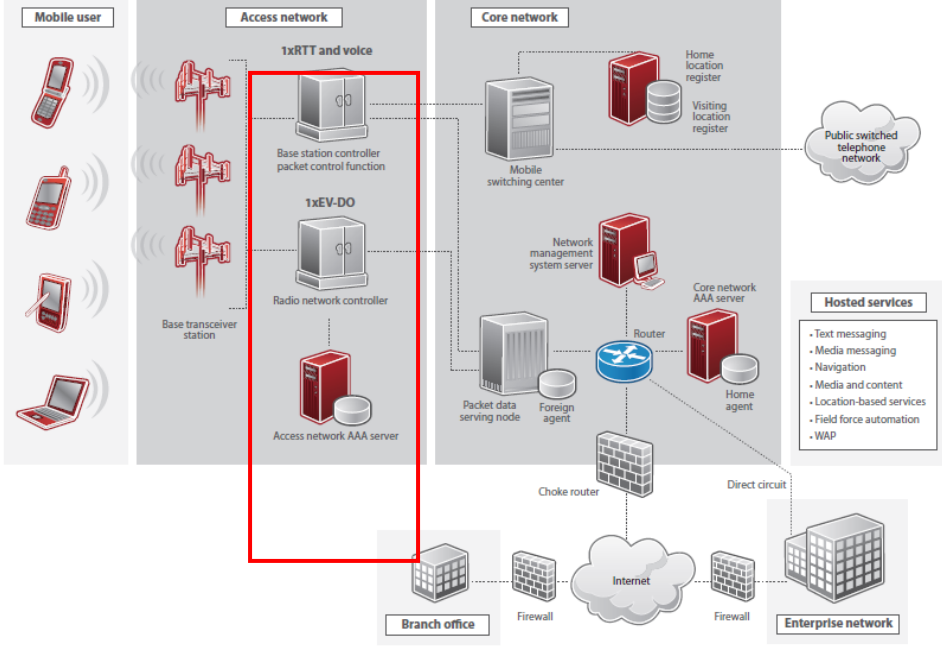
IV. INFRINGEMENT ('175 Patent (attached as Exhibit B))

14. On August 20, 2019, U.S. Patent No. 10,390,175 ("the '175 patent"), attached as Exhibit B, entitled "Mobile wireless device tracking and notification system" was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the '175 patent by assignment.

15. The '175 Patent's Abstract states, "A mobile wireless network and a method of operation provide tracking of mobile devices either in a passive mode or an active mode. In the passive mode, fault detection triggers generation of a case file associated with the device experiencing the fault. In the active mode, a user of the system can specify tracking mobile devices by sector or one or more mobile devices by identifier. Notifications can be generated in response to detection of a fault, or when a device enters a predetermined geographic region."

16. The following preliminary exemplary chat provides Traxcell's allegations of infringement.

Exemplary Claim	Corresponding Structure in Accused Systems
A system including:	
at least one radio-frequency transceiver and an associated at least one antenna to which the at least one radio-frequency transceiver is coupled,	<p>Plaintiff contends that the Verizon network use base stations. Base stations include at least one radio-frequency transceiver designed and used in association with at least one antenna. When base-station transceivers and antennas are in communication, they are coupled. Further, in addition to being so coupled, the transceivers and antenna are also, by placement within a base station, physically coupled.</p> <p>The following exemplifies this limitation's existence in Accused Systems:</p> <p>Base Transceiver Station</p> <p>The base transceiver station (BTS) is physically composed of antennas and towers. The BTS manages including radio channel assignment and transmit and receive power management and acts mobile stations.</p>

Exemplary Claim	Corresponding Structure in Accused Systems
	 <p>The diagram illustrates a mobile network architecture. On the left, 'Mobile user' devices (phones and a laptop) connect to the 'Access network'. The 'Access network' contains a 'Base transceiver station' and an 'Access network AAA server'. A red box highlights the '1xRTT and voice' and '1xEV-DO' components, which are connected to a 'Base station controller packet control function' and a 'Radio network controller'. The 'Core network' includes a 'Mobile switching center', 'Home location register', 'Visiting location register', 'Network management system server', 'Core network AAA server', 'Packet data serving node', 'Foreign agent', and a 'Router'. The 'Router' connects to a 'Choke router' and an 'Internet' cloud. The 'Internet' cloud connects to a 'Branch office' and an 'Enterprise network' via 'Firewall' components. A 'Direct circuit' also connects the 'Router' to the 'Enterprise network'. 'Hosted services' listed include Text messaging, Media messaging, Navigation, Media and content, Location-based services, Field force automation, and WAP. A 'Public switched telephone network' is also shown connected to the 'Core network'.</p>
<p>wherein the at least one radio-frequency transceiver is configured for radio-frequency communication with at least one mobile wireless communications device; and</p>	<p>Plaintiff contends each base station has a RF transceiver whose parameters have been configured for RF communication with mobile wireless communications devices.</p>
<p>a system of computers coupled to the at least one radio-frequency transceiver programmed to locate the at least one mobile</p>	<p>Please note that Verizon uses three types of self-organizing network technology, that is, C-SON, D-SON and V-SON and uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON.</p> <p>Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network,</p>

Exemplary Claim	Corresponding Structure in Accused Systems
<p>wireless communications device and acquire an indication of a location of the at least one mobile wireless communications device,</p>	<p>Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in Verizon Wireless' said wireless telecommunications network, constituting the "system of computers," corresponds to this claim limitation, as the SON Optimization Manager ascertains the location information of UEs from MDT (Minimization of Drive Tests) reports, UE Measurement Reports, CTR (Cell Traffic Recordings), UETR (UE Traffic Recording), etc. received or collected in the form of PM and Trace data.</p> <p>Further, Ericsson's SON solution includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. Ericsson SON Suite includes the software programs that run the Ericsson's SON solution. The system of computers supporting the Ericsson's SON solution include Verizon Wireless' wireless telecommunications network's Operations Support System (OSS or OSS-RC), Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server. (Please note that Ericsson SON Optimization Manager together with Ericsson Network Manager and Network IQ delivers the full suite.)</p> <p>Also, Ericsson's SON solution is integrated/interfaced with the client wireless network's (in the present case, Verizon Wireless') Operations Support System (OSS or OSS-RC) and other systems in the OAM (Operations, Administration and Management) level of the network architecture. The client MNO's (Verizon Wireless') wireless network's Operations Support System (OSS or OSS-RC) is communicatively connected to the Radio Access Network (RAN) portion of the client MNO's (Verizon Wireless') wireless network. The said Radio Access Network (RAN) includes base stations (NodeBs, eNodeBs, RBS etc.). Thus, Ericsson's SON solution is communicatively connected to the base stations (NodeBs, eNodeBs, RBS etc.) in the Radio Access Network (RAN) portion of the client MNO's (Verizon Wireless') wireless network. The system is coupled to these base station(s) communicatively and in some Accused Systems structurally by system-architecture structure (e.g., wire) to locate one or more mobile wireless communications devices and generate or acquire an indication of locations of those devices.</p> <p>Cells include base stations for transmission and reception of wireless signals to and from the mobile wireless communication devices or UEs or user devices (mobile</p>

Exemplary Claim	Corresponding Structure in Accused Systems
	<p>phones, laptops, tablets, PDAs etc.). These base stations are, therefore, RF transceivers. Also, these base stations are coupled with at least one antenna for the function of transmission and reception.</p>
<p>wherein the system of computers further receives and stores performance data of connections between the at least one mobile wireless communications device and the at least one radio frequency transceiver along with the indication of the location,</p>	<p>Plaintiff contends that a network of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in Verizon Wireless' said wireless telecommunications network, constituting the "System of Computers" corresponds to this claim limitation. That is, the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. and the software programs that run them} in the wireless telecommunications network, corresponds to this claim limitation, as the system of computers executing or loaded with Ericsson SON Optimization Manager, SON Policy Manager, SON Visualization, etc. receives performance data of connections between the one or more mobile wireless communications devices and radio frequency transceivers (i.e., base-stations or radio towers) from Position Referencing Signals (PRS), the MDT (Minimization of Drive Tests) reports, UE Measurement Reports, Trace data, etc. and stores the performance data along with indication of the location.</p> <p>The software code is programmed to store the performance data and corresponding location for a wireless device in a memory associated with the system of computers because the software code is programmed to collect performance measurements pertaining to qualitative and quantitative aspects of the operation of wireless network.</p> <p>The system of computers installed or compatible with Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc.] routinely receives performance measurements pertaining to qualitative and quantitative aspects (for example, expressed in terms of KPIs) of RF-based interactions between the UEs and the base-stations which can include performance data along with location information of mobile wireless communications devices. Further, the collected data is stored by the system of computers.</p>

Exemplary Claim	Corresponding Structure in Accused Systems
<p>wherein the system of computers, responsive to a first user input specifying a selection between operating in an active mode or a passive mode,</p>	<p>Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution (which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.) receives user or operator input specifying a selection between operating in different modes or methods, for example, signalling based MDT or trace, management (or area) based MDT or trace, etc.</p>
<p>wherein the system of computers, responsive to selection of the active mode, receives a second user input specifying the at least one mobile wireless communications device to track and a time period to track the at least one mobile wireless communications device and generates a case file containing locations of the at least one mobile wireless communications device over the specified time period, and</p>	<p>Plaintiff contends that the user or operator by using system of computers executing or loaded with Verizon's Ericsson's SON solution (which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.) can specify at least one mobile wireless communications device to track as well as a time period to track the at least one mobile wireless communications device by selecting methods, for example, Position referencing Signals (PRS), signaling based MDT trace, management (or area) based MDT or trace, etc. Further, a file or a record is generated containing location(s) of the at least one mobile wireless communications device for the specified time period.</p>

Exemplary Claim	Corresponding Structure in Accused Systems
wherein the system of computers, responsive to selection of the passive mode, receives a third user input specifying at least one sector and an error criteria to use in conjunction with generating the case file.	<p>Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution (which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.) can receive user input specifying at least one sector (for example, by selecting methods such as Management (or Area) based MDT or trace, etc.) as well as an error criteria to use in conjunction with generating the case file.</p> <p>The following exemplifies this limitation's existence in Accused Systems:</p>

17. Defendant makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use identified locations of wireless devices to provide tracking such that Defendant infringes claims 1–18 of the '175 patent, literally or under the doctrine of equivalents.

18. Defendant put the inventions claimed by the '175 Patent into service (i.e., used them); but for Defendant's actions, the claimed-inventions embodiments involving Defendant's products and services would never have been put into service. Defendant's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Defendant obtaining monetary and commercial benefit from it.

19. Defendant has and continues to induce infringement. Defendants have actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use identified locations of wireless devices to provide tracking of mobile devices) such to cause

infringement claims 1–18 of the '175 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known and should have known of the '175 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant's patent applications, such that Defendant knew and should have known that it was and would be inducing infringement.

20. Defendant has and continues to contributorily infringe. Defendant has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components that use identified locations of wireless devices to provide tracking of mobile devices) such as to cause infringement of one or more of claims 1–18 of the '175 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known of the '175 patent and the technology underlying it from at least the date of issuance of the patent or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant's patent applications, such that Defendant knew and should have known that it was and would be contributorily infringing.
21. Defendants have caused and will continue to cause Traxcell damage by infringing the '175 patent.

V. INFRINGEMENT ('517 Patent (Attached as exhibit C))

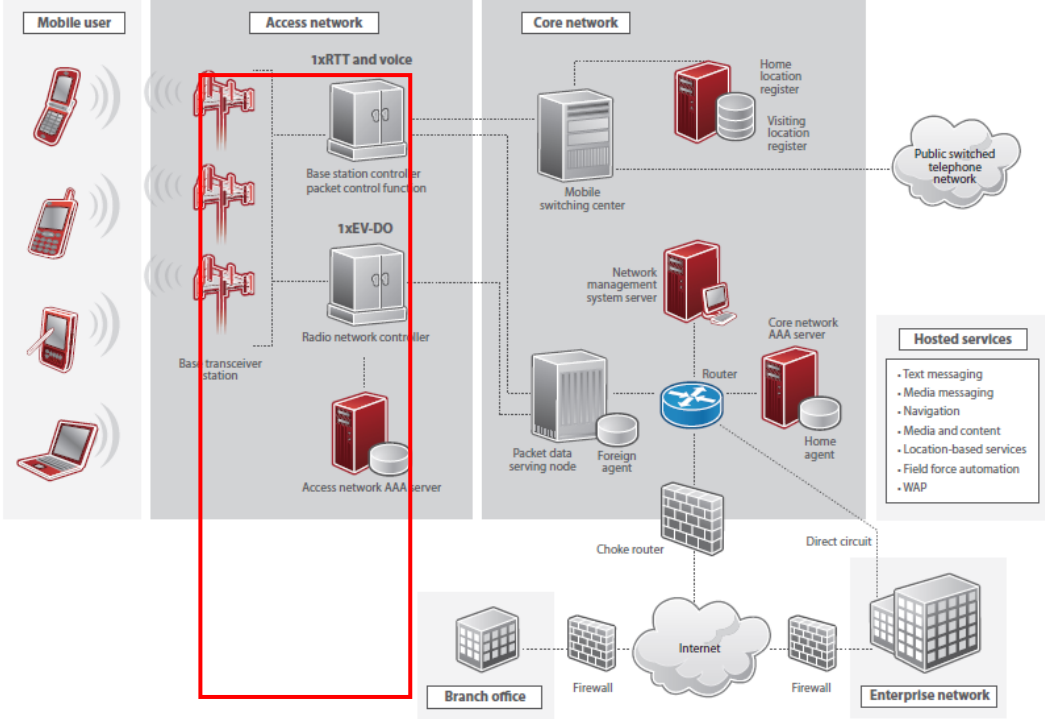
22. On June 30, 2020, U.S. Patent No. 10,701,517 ("the '517 patent"), attached as Exhibit C, entitled "Wireless network and method for suggesting corrective action based on

performance and controlling access to location information” was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the ‘517 patent by assignment.

23. The ‘517 Patent’s Abstract states, “A mobile device, wireless network and their method of operation provide suggestion of corrective actions of the network based on performance evaluation of communications between a connected mobile device and the communications network. The communications network tracks location of mobile devices and stores performance data of connections between the mobile devices and the network. The performance data is referenced to expected performance data to determine whether a fault exists and a corrective action is suggested when the fault exists. Access to the location information by another computer is controlled by a preference flag set in response to a communication from the mobile device.”

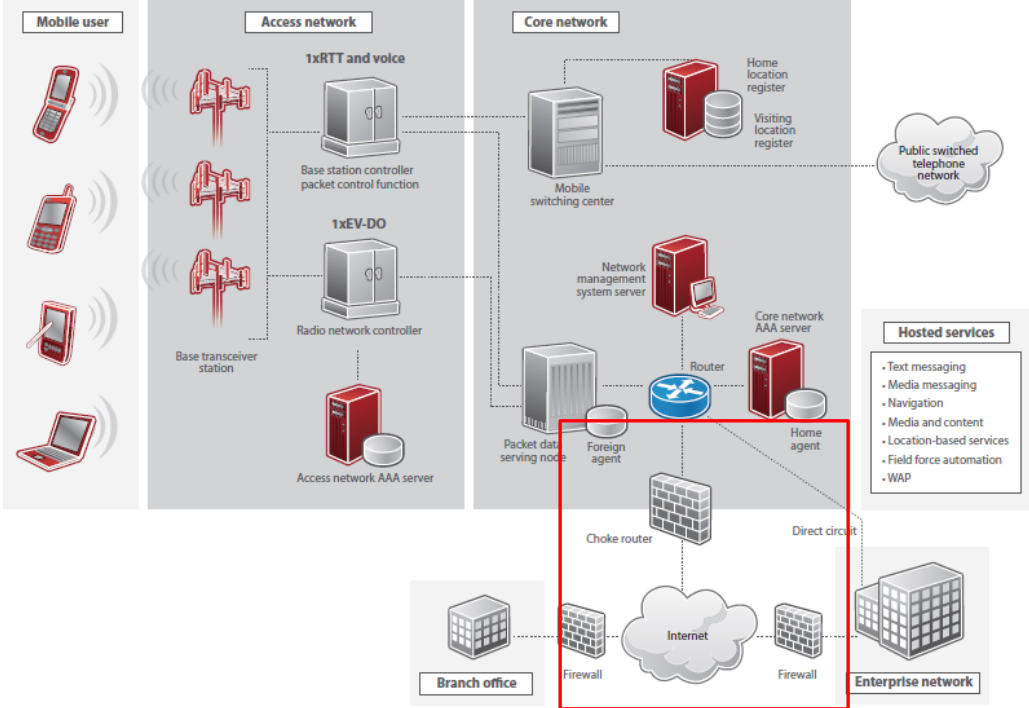
24. The following preliminary exemplary chart provides notice of Traxcell’s allegations of infringement.

Representative Claim	Corresponding Structure in Accused Systems
A wireless network including:	
a radio tower adapted to receive radio frequency signals from, and transmit radio frequency signals to, at least one wireless device;	Plaintiff contends the Verizon wireless network has base stations adapted to transmits and receive radio frequency signals from one or more wireless devices.

Representative Claim	Corresponding Structure in Accused Systems
	 <p>The diagram illustrates a mobile network architecture. On the left, 'Mobile user' includes icons for a flip phone, a smartphone, and a laptop. The 'Access network' is divided into '1xRTT and voice' and '1xEV-DO' sections. A red box highlights the radio tower area, which includes a 'Base transceiver station' and an 'Access network AAA server'. The 'Core network' contains a 'Mobile switching center', 'Home location register', 'Visiting location register', 'Network management system server', 'Packet data serving node', 'Foreign agent', 'Router', 'Core network AAA server', and 'Home agent'. It also shows connections to a 'Public switched telephone network' and 'Hosted services' (Text messaging, Media messaging, Navigation, Media and content, Location-based services, Field force automation, WAP). At the bottom, it shows a 'Branch office' connected to the 'Internet' via a 'Firewall', and an 'Enterprise network' connected via a 'Direct circuit' and 'Choke router'.</p>
<p>a system of computers programmed to perform steps of referencing performance of the at least one wireless device with wireless network known parameters and routinely storing performance data for the at least one wireless device,</p>	<p>Radio Tower(s)</p> <p>Please note that Verizon uses three types of self-organizing network technology, that is, C-SON, D-SON and V-SON and uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON.</p> <p>Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless telecommunications network, constituting the "system of computers," corresponds to this claim limitation.</p> <p>Further, Ericsson's SON solution includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. and the system of computers</p>

Representative Claim	Corresponding Structure in Accused Systems
	<p>supporting the Ericsson's SON solution include Verizon Wireless' wireless telecommunications network's Operations Support System (OSS or OSS-RC), Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server. (Please note that Ericsson SON Optimization Manager together with Ericsson Network Manager and Network IQ delivers the full suite.)</p> <p>Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} is programmed to reference performance of the wireless device(s) with wireless network known parameters and to routinely store performance data for the wireless device(s). That is, the system of computers executing or loaded with Ericsson's SON solution receives or collects UE-referenced network and device performance measurements from the MDT (Minimization of Drive Tests) reports, UE Measurement Reports, etc. and compares the collected (or received) performance data against the corresponding pre-defined standards or thresholds.</p> <p>The Ericsson's SON solution has software code specifically designed for use by one or more computers. The system of computers is linked or connected to the wireless network consisting of the various network elements including the radio-tower(s) or base-station(s).</p> <p>Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution; and operating, implementing and supporting SON solution in the wireless telecommunications network, corresponds to this claim limitation, as the system of computers executing or loaded with Ericsson's SON solution references performance of the wireless device(s) with wireless network known parameters and routinely stores performance data for the wireless device(s).</p> <p>The Ericsson's SON software codes are programmed to routinely store the performance data for a wireless device in a memory or cache associated with the system of computers because the software codes are programmed to collect performance measurements pertaining to qualitative and quantitative aspects of the operation of wireless network. That is, the system of computers installed or compatible with Ericsson's SON solution routinely references performance measurements pertaining to qualitative and quantitative aspects of the wireless device(s) (for example, expressed in terms of Key Performance Indices or KPIs,</p>

Representative Claim	Corresponding Structure in Accused Systems
	Performance Metrics, Performance Data, etc.) with wireless network known parameters and stores the performance data for one or more wireless devices.
wherein the system of computers further receives the performance data and suggests at least one corrective action in conformity with a comparison of the performance data and the wireless network known parameters; and	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} receives the performance data and suggests one or more corrective actions in conformity with a comparison of the performance data and the wireless network known parameters.
another one or more computers other than the system of computers, wherein at least one of the another one or more computers is coupled in communication with the system of computers,	<p>Plaintiff contends that the wireless network can include another computer(s) (for example, third-parties, LBS providers, subsidiaries, etc.) other than the system of computers and another computer(s) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. }.</p> <p>The following exemplifies this limitation's existence in Accused Systems:</p>

Representative Claim	Corresponding Structure in Accused Systems
	
<p>wherein the system of computers is programmed to provide an indication of location of the at least one wireless device to the another one or more computer,</p>	<p>Plaintiff contends that another computer(s) (for example, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}. The system of computers can provide access to an indication of location to another computer(s).</p>
<p>and wherein the another one or more computers, responsive to a communication from the at least one wireless device, set a no access flag within</p>	<p>Plaintiff contends that another computer(s) (for example, PDE, Positioning Engine, Location server, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}.</p> <p>The Another computer(s) being in communication with the system of computers and responsive to a communication from the wireless devices.</p>

Representative Claim	Corresponding Structure in Accused Systems
a memory of at least one of the another one or more computers,	
and wherein the another one or more computers provides access to an indication of location of the at least one wireless device from the another one or more computers if the no access flag is reset and denies access to the indication of location of the at least one wireless device from the another one or more computers if the no access flag is set.	<p>Plaintiff contends that another computer(s) (for example, PDE, Positioning Engine, Location server, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}.</p> <p>The Another computer(s) being in communication with the system of computers and responsive to a communication from the wireless devices are capable of configuring or setting a no access flag within the memory of another computer(s).</p> <p>Therefore, the Another computer(s) provides access to an indication of location from another computer(s) if the no access flag is reset and denies access to the indication of location from another computer(s) if the no access flag is set.</p>

25. Defendant makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Defendant infringes claims 1–29 of the '517 patent, literally or under the doctrine of equivalents.

26. Defendant put the inventions claimed by the ‘517 Patent into service (i.e., used them); but for Defendant’s actions, the claimed-inventions embodiments involving Defendant’s products and services would never have been put into service. Defendant’s acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Defendant obtaining monetary and commercial benefit from it.
27. Defendant has and continues to induce infringement. Defendants have actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions and controlling access to location information) such to cause infringement claims 1–29 of the ‘517 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known and should have known of the ‘517 patent, by at least by the date of the patent’s issuance, or from the issuance of the ‘284 patent, which followed the date that the patent’s underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant’s patent applications, such that Defendant knew and should have known that it was and would be inducing infringement.
28. Defendant has and continues to contributorily infringe. Defendant has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–29 of the ‘517 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known of the ‘517 patent and the technology underlying it from

at least the date of issuance of the patent or from the issuance of the ‘284 patent, which followed the date that the patent’s underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant’s patent applications, such that Defendant knew and should have known that it was and would be contributorily infringing.

29. Defendants have caused and will continue to cause Traxcell damage by infringing the ‘517 patent.

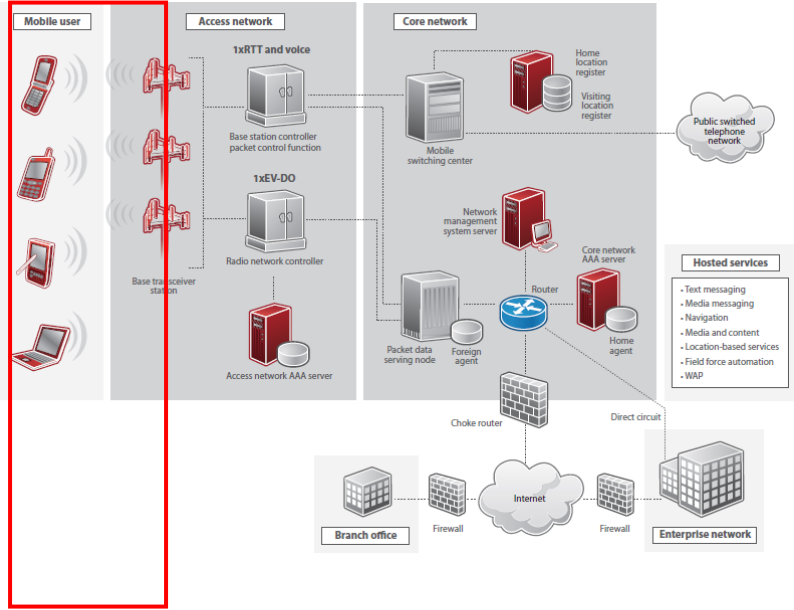
VI. INFRINGEMENT (‘135 Patent (Attached as exhibit D))

30. On August 11, 21020, U.S. Patent No. 10,743,135 (“the ‘135 patent”), attached as Exhibit D, entitled “Wireless network and method for suggesting corrective action in response to detecting communications errors” was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the ‘135 patent by assignment.

31. The ‘135 Patent’s Abstract states, “A mobile wireless network and a method of operation provide analysis of mobile wireless device communications and suggested corrective initiated upon detecting communications performance issues. In some embodiments, the operations include blocking access to location information pertaining to a mobile wireless device based on the state of access flag that is maintained in the network for the mobile wireless device.”

32. The following preliminary exemplary chart provides Traxcell’s allegations of infringement.

Representative Claim	Corresponding Structure in Accused Systems
A wireless network, comprising:	

Representative Claim	Corresponding Structure in Accused Systems
<p>at least two wireless devices each communicating via radio frequency signals;</p>	<p>The following exemplifies this limitation's existence in Accused Systems:</p>  <p>The diagram illustrates a mobile network architecture. On the left, a 'Mobile user' section (highlighted with a red box) shows three mobile devices (two smartphones and one laptop) communicating with a 'Base transceiver station'. This station is part of the 'Access network', which also includes a '1xRTT and voice' block, a 'Base station controller/packet control function', a '1xEV-DO' block, and a 'Radio network controller'. The access network connects to the 'Core network'. The core network contains a 'Mobile switching center', 'Home location register', 'Visiting location register', 'Network management system server', 'Core network AAA server', 'Home agent', 'Router', 'Packet data serving node', and 'Foreign agent'. The core network is connected to a 'Public switched telephone network' and a 'Hosted services' block. The hosted services include: Text messaging, Media messaging, Navigation, Media and content, Location-based services, Field force automation, and WAP. The core network also connects to an 'Internet' cloud, which is further connected to a 'Branch office' and an 'Enterprise network' via 'Firewall' and 'Choke router' components. A 'Direct circuit' is also shown connecting the core network to the enterprise network.</p>
<p>a system of computers programmed to perform steps of referencing performance of at least one of the at least two wireless devices with wireless network known parameters and routinely storing performance data for the at least one</p>	<p>Please note that Verizon uses three types of self-organizing network technology, that is, C-SON, D-SON and V-SON and uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON.</p> <p>Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless telecommunications network, constituting the "system of computers", corresponds to this claim limitation, as the system receives MDT (Minimization of Drive Tests) reports,</p>

Representative Claim	Corresponding Structure in Accused Systems
<p>of the at least two wireless devices;</p>	<p>UE Measurement Reports, CTR (Cell Traffic Recordings), UETR (UE Traffic Recording), etc., received or collected in the form of PM and Trace data.</p> <p>Further, Ericsson's SON solution includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. and the system of computers supporting the Ericsson's SON solution include Verizon Wireless' wireless telecommunications network's Operations Support System (OSS or OSS-RC), Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server. (Please note that Ericsson SON Optimization Manager together with Ericsson Network Manager and Network IQ delivers the full suite.)</p> <p>Plaintiff contends that a system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. } is programmed to reference performance of the wireless device(s) with wireless network known parameters and to routinely store performance data for the wireless device(s). That is, the system of computers receives or collects UE-referenced network and device performance measurements from the MDT (Minimization of Drive Tests) reports, UE Measurement Reports, etc. and compares the collected (or received) performance data against the corresponding pre-defined standards or thresholds. The system of computers is linked or connected to the wireless network consisting of the various network elements including the radio-tower(s) or base-station(s).</p> <p>Further, plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} and operating, implementing and supporting SON solution in the wireless telecommunications network, corresponds to this claim limitation, as the system of computers references performance of the wireless device(s) with wireless network known parameters and routinely stores performance data for the wireless device(s).</p>
<p>a first radio tower adapted to receive the radio frequency signals from, and transmit the radio frequency signals to, the at least one</p>	<p>Plaintiff contends the Verizon wireless network has radio towers adapted to receive RF signals from and transmit the RF signals to the wireless communications devices (specifically one or more of the mobile wireless communications devices).</p>

Representative Claim	Corresponding Structure in Accused Systems
of the at least two wireless devices,	
wherein the system of computers further receives the performance data and suggests at least one corrective action obtained from a list of possible causes for the first radio tower based upon the performance data for the at least one of the at least two wireless devices,	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} is further programmed to receive the performance data and suggests one or more corrective actions for the radio tower or base-station based upon the performance data for one or more wireless devices. The following exemplifies this limitation's existence in Accused Systems:
wherein the first radio tower generates an error code based upon operation of the at least one of the at least two wireless devices,	Plaintiff contends that the radio tower or base-station generates an error code (for example, in the form of alerts, alarms, notifications, etc.) based upon operation of one or more wireless devices. The following exemplifies this limitation's existence in Accused Systems:
wherein the system of computers is further programmed to receive the error code from the first radio tower;	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} corresponds to this claim limitation. The system of computers performs management functions such as Fault Management (FM), etc. and is capable of receiving network errors or faults from the radio tower(s) in the form of alerts or alarms or notifications.
and wherein the system of	Plaintiff contends that based upon the error-code, the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager

Representative Claim	Corresponding Structure in Accused Systems
<p>computers is programmed, based upon the error code, to suggest the at least one corrective action as an adjustment of the radio frequency signals of the second radio tower in order to direct processing of signals from the at least one of the at least two wireless devices based upon the error code,</p>	<p>(SON OM), SON Policy Manager, SON Visualization, etc., is programmed to suggest the one or more corrective actions as an adjustment of RF signals of another radio-tower(s) or base-station(s) for direct processing of signals from one or more of the wireless devices based upon the error-code.</p> <p>The system of computers can perform SON related functions that require alarm monitoring from the network elements (for example, radio-towers, etc.) which implies that more than one radio-towers or base stations are present in the network. The system of computers optimizes the network by adjusting and fine-tuning network parameters such as antenna tilt, transmission power, etc. of the concerned radio-tower(s) or base-station(s) based on RF information. These actions are suggested or performed by the system for automatically adjusting the parameters of the radio-tower(s) or base-station(s) in order to direct process signals from one or more of the wireless devices.</p>
<p>whereby the system of computers suggests a corrective action of the radio frequency signals of the first radio tower and the second radio tower in order to improve communication with one or more of the at least two wireless devices based on the error code.</p>	<p>Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} suggests one or more corrective actions of the RF signals of the one or more radio-towers or base-stations in order to improve communication with one or more wireless devices based on the error code.</p> <p>As already mentioned above, the system of computers can perform SON related functions. The system of computers optimizes the network by adjusting and fine-tuning network parameters such as antenna tilt, transmission power, etc. of the concerned radio-tower(s) or base-station(s) based on the RF information. These actions are suggested or performed by the system for automatically adjusting the parameters of the radio-tower(s) or base-station(s) for improving communication with one or more wireless devices based on the error code.</p>

33. Defendant makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions such that Defendant infringes claims 1–30 of the ‘135 patent, literally or under the doctrine of equivalents.
34. Defendant put the inventions claimed by the ‘135 Patent into service (i.e., used them); but for Defendant’s actions, the claimed-inventions embodiments involving Defendant’s products and services would never have been put into service. Defendant’s acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Defendant obtaining monetary and commercial benefit from it.
35. Defendant has and continues to induce infringement. Defendants have actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions) such to cause infringement claims 1–30 of the ‘135 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known and should have known of the ‘135 patent, by at least by the date of the patent’s issuance, or from the issuance of the ‘284 patent, which followed the date that the patent’s underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant’s patent applications, such that Defendant knew and should have known that it was and would be inducing infringement.
36. Defendant has and continues to contributorily infringe. Defendant has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective

actions) such as to cause infringement of one or more of claims 1–30 of the ‘135 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known of the ‘135 patent and the technology underlying it from at least the date of issuance of the patent or from the issuance of the ‘284 patent, which followed the date that the patent’s underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant’s patent applications, such that Defendant knew and should have known that it was and would be contributorily infringing.

37. Defendants have caused and will continue to cause Traxcell damage by infringing the ‘135 patent.

VII. INFRINGEMENT ‘147 Patent (Attached as exhibit E))

38. On October 27, 2020, U.S. Patent No. 10,820,147 (“the ‘147 patent”), attached as Exhibit E, entitled “Mobile wireless device providing off-line and on-line geographic navigation information” was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the ‘147 patent by assignment.

39. The ‘147 Patent’s Abstract states, “A mobile device, wireless network and their method of operation provide both on-line (connected) navigation operation, as well as off-line navigation from a local database within the mobile device. Routing according to the navigation system can be controlled by traffic congestion measurements made by the wireless network that allow the navigation system to select the optimum route based on expected trip duration.”

40. The following preliminary exemplary chart provides Traxcell’s allegations of infringement.

Exemplary Claim	Corresponding Structure in Accused Systems
A wireless communications system including:	
a first radio-frequency transceiver within a wireless mobile communications device and an associated first antenna to which the first radio-frequency transceiver is coupled,	Plaintiff contends that the Verizon wireless network has base stations that include a radio frequency transceiver. Wireless mobile communication device— including but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc. (refer Exhibit B for complete list)—include radio-frequency transceivers and an associated antenna. When wireless communication device’s transceivers and antennas are in communication, they are coupled.
wherein the first radio-frequency transceiver is configured for radio-frequency communication with a wireless communications network;	Plaintiff contends that the wireless communication device on the Verizon wireless network includes a radio frequency transceiver. Wireless mobile communication device— including but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc. (refer Exhibit B for complete list)—include radio-frequency transceivers and an associated antenna. When wireless communication device’s transceivers and antennas are in communication, they are coupled.
a first processor within the wireless mobile communications device coupled to the at least one first radio-frequency	Plaintiff contends that each Verizon wireless device includes a processor. Wireless mobile communication device- including but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X,

Exemplary Claim	Corresponding Structure in Accused Systems
<p>transceiver programmed to receive information indicative of a location of the wireless mobile communications device and generate an indication of a location of the wireless mobile communications device with respect to geographic features according to mapping information stored within the wireless mobile communications device,</p>	<p>Apple iPhone SE etc. has a processor. When wireless communication device's transceivers and processor are in communication, they are coupled. Further, the Verizon Navigator application or other application such as Google Maps, on the Exhibit-B utilizes the processor coupled to the transceiver to estimate/receive the location on mobile wireless communications devices (specifically one or more of the mobile wireless communications devices identified on Exhibit B) by utilizing Exhibit C (wireless communication network or first computer).</p> <p>Icon (for example, "My GPS Location") on the Verizon Navigator application maps indicates the location of the wireless communication device (specifically one or more of the mobile wireless communications devices identified on Exhibit B), with respect to the various geographical features such as streets, cities, or any point of interest. Furthermore, the Verizon Navigator application mapping information comes through the Verizon wireless network i.e. by using data plan or Wi-Fi network and is stored within the memory of the wireless communication device</p>
<p>and wherein the first processor determines user navigation information and displays the user navigation information according to the location of the wireless mobile communications device with respect to the geographic features and a</p>	<p>Plaintiff contends that the processor processes location-service information, including displaying user navigation information according to the device's location with regards to geographic features and a user-specified destination. For example, using Google Maps, Verizon VZ Navigator or other such application, the user device locates the device's current location on Google Maps app or Verizon VZ Navigator app and then provides details for destination on the options, provided in Google Maps, Verizon VZ Navigator or other such application. The user can then navigate (i.e., the processor processes display information) in real time from current location to destination. The processor displays navigation information on Google Maps, Verizon VZ Navigator or other such application to display turn-by-turn directions. Using Google Maps, Verizon VZ Navigator or other such application, the processor will show the directions and use real-time traffic information to find the best route to the specified destination.</p>

Exemplary Claim	Corresponding Structure in Accused Systems
<p>destination specified at the wireless mobile communications device,</p>	<p>The wireless communication device having Verizon VZ Navigator application or Google maps, displays to the user navigation information, based on the destination entered by the user.</p> <p>The Verizon VZ Navigator application or Google maps estimates/receives the location of the wireless communication device (specifically one or more of the mobile wireless communications devices identified on Exhibit B), by utilizing Exhibit C (wireless communication network), that is, Verizon communication network, and indicates it on the map with respect of various geographic features such as streets, cities, or any point of interest. The Verizon VZ Navigator application or Google Maps provides route from present location to the destination entered by the user on the wireless communication device.</p>
<p>wherein the first processor further sends the user navigation information to the network as a number of segments,</p>	<p>Plaintiff contends that each Verizon wireless device (and others) corresponds to this claim limitation because each Exhibit-B item includes a processor. Wireless mobile communication device- including but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc. has a processor.</p> <p>Further, the Verizon VZ Navigator application or Google Maps or any other location based application, on the Exhibit-B utilizing the processor can send the user navigation information to the network as a number of segments as to receive the traffic information for the segments, it is required to send the navigation information to the network as a number of segments.</p>
<p>wherein at least one other processor outside the network updates the user navigation information in conformity with traffic congestion information accessible to the at</p>	<p>Plaintiff contends that Verizon Navigator server or Google Maps server or any other location based services server (Exhibit D) corresponds to this claim limitation because each such location based services server can be outside the network and needs to be contacted to update the user navigation information in conformity with traffic congestion information accessible to the server by computing a numerical value for the segments corresponding to the expected time to travel through the segments.</p>

Exemplary Claim	Corresponding Structure in Accused Systems
<p>least one other processor outside the network by computing a numerical value for the segments corresponding to the expected time to travel through the segments,</p>	
<p>updates the user navigation information in conformity with the numerical values for the segments, and sends the updated user navigation information to the wireless mobile communications device;</p>	<p>Plaintiff contends that Verizon Navigator server or Google Maps server or any other location based server corresponds to this claim limitation because each such server updates the user navigation information in conformity with the numerical values for the segments and sends the updated user navigation information to the wireless mobile communications device.</p>
<p>at least one second radio-frequency transceiver and an associated at least one second antenna of the wireless communications network to which the second radio-frequency transceiver is coupled; and</p>	<p>Plaintiff contends that each Verizon base station corresponds to this claim limitation because each is a base station. The Verizon's communication network includes cell sites or towers (examples of different types of compatible Verizon access points or towers are Verizon towers as well as towers sold by third-parties to Verizon, Verizon small cells, Verizon network extenders or signal boosters, Verizon antennae, etc.) which provide radio communication to and from wireless communication devices. Thus, the cell sites (base stations) include the radio frequency transceiver coupled with antenna in Verizon's communication network. Towers and base stations include radio-frequency transceivers designed and used for radio-frequency communication with at least one antenna. When base-station transceivers and antennas are in communication, they are coupled. Further, in addition to being so coupled, the transceivers and antenna, by placement within a base station, physically coupled.</p>

Exemplary Claim	Corresponding Structure in Accused Systems
<p>a second processor coupled to the at least one second radio-frequency transceiver programmed to acquire the information indicative of a location of the wireless mobile communications device,</p>	<p>Plaintiff contends that a computer corresponds to this claim limitation because each described computer is coupled to cell sites/base station of the Verizon's communication network which provides radio communication to and from wireless communication mobile devices. The cell sites/base station include the radio frequency transceiver(s) and the associated antenna(s).</p> <p>It is to be noted that Verizon uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON.</p> <p>Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless telecommunications network, is equivalent to the second processor and corresponds to this claim limitation, as such "system of computers" is coupled to the second radio-frequency transceiver and receives MDT (Minimization of Drive Tests) reports, UE Measurement Reports, CTR (Cell Traffic Recordings), UETR (UE Traffic Recording), etc., received or collected in the form of PM and Trace data.</p> <p>Therefore, the second processor ascertains wireless mobile communications device geolocation information from Position Reference Signals (PRS), the MDT reports, UE measurement reports and Trace data (CTR and UETR) received or collected in the form of PM (Performance Measurements) and Trace data.</p> <p>The second processor i.e. First Computer communicatively coupled to the second RF transceiver(s) and second antenna is programmed to determine a wireless mobile communication device's location.</p>
<p>wherein the second processor selectively acquires the information indicative of a</p>	<p>Plaintiff contends that the Verizon wireless network has a computer that corresponds to this claim limitation because second processor will only be able to determine the location of the Wireless communication device, if the location flag on the Wireless communication device is set or turned "ON".</p>

Exemplary Claim	Corresponding Structure in Accused Systems
location of the wireless mobile communications device dependent on the setting of preference flags,	
wherein the second processor acquires the information indicative of a location of the wireless mobile communications device if the preference flags are set to a state that permits tracking of the wireless mobile communications device,	<p>Plaintiff contends a wireless device can set preference flags that enable or disable accessibility to data relevant to the device's location by the Verizon computer or second processor. Such programmability by a wireless device is at times known as a privacy setting. Further, such programmability is available by location-permission granting (wireless mobile communications device must grant permission).</p> <p>The Verizon computer will only be able to determine and track the location of the Wireless communication device such as but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc., if the location flag on the Wireless communication device is turned "ON" (that is, locations privacy settings are set to "On").</p>
and wherein the second processor does not acquire the information indicative of the location of the wireless mobile communications device if the preference flags are set to a state that prohibits tracking of the wireless mobile	<p>Plaintiff contends that a Verizon wireless network computer corresponds to this claim limitation because if the preference flags are not enabled (i.e., the wireless-mobile-communication device's user has not granted permission), the computer or second processor do not proceed with determining the device's location or communicating that location.</p> <p>The computer will not be able to determine and track the location of the Wireless communication device such as but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X,</p>

Exemplary Claim	Corresponding Structure in Accused Systems
communications device.	Apple iPhone SE etc. if the location flag on the Wireless communication device is turned off (that is, locations privacy settings are set to “off”).

41. Defendant makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use identified locations of wireless devices to provide directional assistance such that Defendant infringes claims 1–24 of the ‘147 patent, literally or under the doctrine of equivalents.

42. Defendant put the inventions claimed by the ‘147 Patent into service (i.e., used them); but for Defendant’s actions, the claimed-inventions embodiments involving Defendant’s products and services would never have been put into service. Defendant’s acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Defendant obtaining monetary and commercial benefit from it.

43. Defendant has and continues to induce infringement. Defendants have actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that provide on-line and off-line navigation) such to cause infringement claims 1–24 of the ‘147 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known and should have known of the ‘147 patent, by at least by the date of the patent’s issuance, or from the issuance of the ‘284 patent, which followed the date that the patent’s underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant’s patent applications, such that Defendant knew and should have known that it was and would be inducing infringement.

44. Defendant has and continues to contributorily infringe. Defendant has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components that provide on-line and off-line navigation) such as to cause infringement of one or more of claims 1–24 of the ‘147 patent, literally or under the doctrine of equivalents. Moreover, Defendant has known of the ‘147 patent and the technology underlying it from at least the date of issuance of the patent or from the issuance of the ‘284 patent, which followed the date that the patent’s underlying application was cited to Defendants by the U.S. Patent and Trademark Office during prosecution of one of Defendant’s patent applications, such that Defendant knew and should have known that it was and would be contributorily infringing.

45. Defendants have caused and will continue to cause Traxcell damage by infringing the ‘147 patent.

VIII. PRAYER FOR RELIEF

WHEREFORE, Traxcell respectfully requests that this Court:

- i. enter judgment that Defendants have infringed the Patents-in-Suit;
- ii. award Traxcell damages in an amount sufficient to compensate it for Defendants’ infringement of the Patents-in-Suit, in an amount no less than a reasonable royalty, together with prejudgment and post-judgment interest and costs under 35 U.S.C. § 284;
- iii. award Traxcell an accounting for acts of infringement not presented at trial and an award by the Court of additional damage for any such acts of infringement;
- iv. declare this case to be “exceptional” under 35 U.S.C. § 285 and award Traxcell its attorneys’ fees, expenses, and costs incurred in this action;

- v. declare Defendants infringement to be willful and treble the damages, including attorneys' fees, expenses, and costs incurred in this action and an increase in the damage award pursuant to 35 U.S.C. §284;
- vi. a decree addressing future infringement that either (i) awards a permanent injunction enjoining Defendants and their agents, servants, employees, affiliates, divisions, and subsidiaries, and those in association with Defendants, from infringing the claims of the Patents-in-Suit or (ii) award damages for future infringement in lieu of an injunction, in an amount consistent with the fact that for future infringement the Defendants will be adjudicated infringers of a valid patent, and trebles that amount in view of the fact that the future infringement will be willful as a matter of law; and,
- vii. award Traxcell such other and further relief as this Court deems just and proper.

JURY DEMAND

Traxcell hereby requests a trial by jury on issues so triable by right.

Respectfully submitted,

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